SANTA CRUZ BIOTECHNOLOGY, INC.

Dermatopontin (F-4): sc-376863



BACKGROUND

Dermatopontin, also known as TRAMP or DPT, is a 201 amino acid secreted protein belonging to the Dermatopontin family. Expressed in fibroblasts, heart, skeletal muscle, brain and pancreas, Dermatopontin may participate in cell-matrix interactions and matrix assembly by possibly serving as a communication link between the cell surface of dermal fibroblasts and their extracellular matrix environment. Dermatopontin may also play a critical role in the elasticity of skin and collagen accumulation attributed to collagen fibrillogenesis. Implicated in accelerating collagen fibril formation, Dermatopontin stabilizes collagen fibrils against low-temperature dissociation. Induced by TGF β 1 and inhibited by IL-4, Dermatopontin may be involved in the pathogenesis and growth of prostate cancer. Dermatopontin enhances the activity of TGF β 1 and inhibits cell proliferation.

REFERENCE

- 1. Kuroda, K., et al. 1999. Dermatopontin expression is decreased in hypertrophic scar and systemic sclerosis skin fibroblasts and is regulated by transforming growth factor- β 1, interleukin-4, and matrix collagen. J. Invest. Dermatol. 112: 706-710.
- 2. Takeda, U., et al. 2002. Targeted disruption of Dermatopontin causes abnormal collagen fibrillogenesis. J. Invest. Dermatol. 119: 678-683.

CHROMOSOMAL LOCATION

Genetic locus: DPT (human) mapping to 1q24.2; Dpt (mouse) mapping to 1 H2.2.

SOURCE

Dermatopontin (F-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-57 near the N-terminus of Dermatopontin of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Dermatopontin (F-4) is available conjugated to agarose (sc-376863 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376863 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376863 PE), fluorescein (sc-376863 FITC), Alexa Fluor[®] 488 (sc-376863 AF488), Alexa Fluor[®] 546 (sc-376863 AF546), Alexa Fluor[®] 594 (sc-376863 AF594) or Alexa Fluor[®] 647 (sc-376863 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376863 AF680) or Alexa Fluor[®] 790 (sc-376863 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376863 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Dermatopontin (F-4) is recommended for detection of Dermatopontin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Dermatopontin (F-4) is also recommended for detection of Dermatopontin in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Dermatopontin siRNA (h): sc-88148, Dermatopontin siRNA (m): sc-143012, Dermatopontin shRNA Plasmid (h): sc-88148-SH, Dermatopontin shRNA Plasmid (m): sc-143012-SH, Dermatopontin shRNA (h) Lentiviral Particles: sc-88148-V and Dermatopontin shRNA (m) Lentiviral Particles: sc-143012-V.

Molecular Weight of Dermatopontin: 22 kDa.

Positive Controls: Dermatopontin (h): 293T Lysate: sc-115088.

DATA 90 K 55 K 43 K 34 K 23 K <td

Dermatopontin (r-4): Sc-376853. Western biot analysis of Dermatopontin expression in non-transfected: sc-117752 (**A**) and human Dermatopontin transfected sc-115088 (**B**) 293T whole cell lysates. Dermatopontin (F-4) HRP: sc-376863 HRP. Direct western blot analysis of Dermatopontin expression in non-transfected: sc-117752 (**A**) and human Dermatopontin transfected: sc-115088 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- 1. Krishnaswamy, V.R. and Korrapati, P.S. 2014. Role of Dermatopontin in re-epithelialization: implications on keratinocyte migration and proliferation. Sci. Rep. 4: 7385.
- Cai, J., et al. 2016. Increased expression of Dermatopontin and its implications for testicular dysfunction in mice. Mol. Med. Rep. 13: 2431-2438.
- Patel, A., et al. 2016. Mifepristone inhibits extracellular matrix formation in uterine leiomyoma. Fertil. Steril. 105: 1102-1110.
- Rippe, C., et al. 2017. Hypertension reduces soluble guanylyl cyclase expression in the mouse aorta via the Notch signaling pathway. Sci. Rep. 7: 1334.
- Seetaraman Amritha, T.M., et al. 2020. Cloning, expression and purification of recombinant Dermatopontin in *Escherichia coli*. PLoS ONE 15: e0242798.

RESEARCH USE

For research use only, not for use in diagnostic procedures.